

PERSONAL INFORMATION

Name and surname	Ana Kesić
Date and place of birth	1984. Kraljevo, Serbia
Scientific title	Senior Research Associate
E-mail	akesic@uni.kg.ac.rs
Educational-scientific / educational-artistic field	Chemical sciences
University, Faculty, Organizational unit	University of Kragujevac, Institute for Information Technologies, Kragujevac/ Center for Experimental Chemistry
Research field and areas	Chemistry, Inorganic chemistry

EDUCATION**BACHELOR**

Year	2003 - 2008
Place	Kragujevac
Institution	University of Kragujevac, Faculty of Science

DOCTORAL DISSERTATION

Year	2008 - 2013
Place	Kragujevac
Institution	University of Kragujevac, Faculty of Science
Title of doctoral dissertation	Investigating the mechanisms of nucleophilic substitution reactions of gold (III) complexes
Scientific title	Ph.D. in Chemical sciences
Research area	Inorganic Chemistry

PROFESSIONAL BIOGRAPHY – ELECTION IN RESEARCH OR SCIENTIFIC TITLE

Date	Institution	Scientific title
28.10. 2024.	Institute for Information Technologies, Kragujevac	Senior Research Associate
26.10.2021.	Institute for Information Technologies, Kragujevac	Research Associate

29.04.2015.	Faculty of Science	Research Associate
17.11.2011.	Faculty of Science	Research Assistant
2008.	Faculty of Science	Junior Research Assistant

PROFESSIONAL BIOGRAPHY - TRAINING

Year	Institution	Duration
2009	Institute of Chemistry and Pharmacy, University of Erlangen-Nuremberg, Germany	1 month
2010	Institute of Chemistry and Pharmacy, University of Erlangen-Nuremberg, Germany	1 month

PARTICIPATION IN NATIONAL PROJECTS FINANCED BY MINISTRY OF EDUCATION/MINISTRY OF SCIENCE AND TECHNOLOGICAL DEVELOPMENT/SCIENCE FUND OF THE REPUBLIC OF SERBIA:

Pproject number – 172011 : "Investigation of the reaction mechanism of transition metal ion complexes with biologically significant molecules". (2011.-2019.)
 Research project by Institute for Information Technologies: „Portable and Sustainable Silver Nanoparticle-Enriched Filter for Organic Color Removal from Dye wastewater“ (2023-2024).

MEMBERSHIP IN SCIENTIFIC AND PROFESSIONAL ASSOCIATIONS

Active member of the Serbian Chemical Society, Registration number 2903.
 Active member of the Serbian Association for Cancer Research
 Active member of the European Association for Cancer Research
 Active member of the Royal Society of Chemistry (ID: 763756)

LIST OF SCIENTIFIC PAPERS:

Papers published in scientific journals of international scientific importance.	Sum
1. Milovanović, M., Djeković, A., Volarević, V., Petrović, B., Arsenijević, N., Bugarčić, Ž. D. Ligand substitution reactions and cytotoxic properties of $[\text{Au}(\text{L})\text{Cl}_2]^+$ and $[\text{AuCl}_2(\text{DMSO})_2]^+$ complexes (L = ethylenediamine and S-methyl-l-cysteine). <i>Journal of Inorganic Biochemistry</i>, 2010, 104(9), 944–949. ISSN: 0162-0134. DOI: 10.1016 2. Volarević, V., Milovanović, M., Djeković, A., Petrović, B., Arsenijević, N., Bugarčić, Ž. D. The cytotoxic effect of some selected gold(III) complexes on	15

- 4T1 cells and their role in prevention of breast tumor growth in BALB/c mice. *Journal of the Balkan Oncology*, 2010, 15(4), 768–773. ISSN: 1107-0625. DOI: IDS Number 710TL
3. **Djeković, A.**, Petrović, B., Puchta, R., Bugarčić, Ž. D., Van Eldik, R. Kinetics and mechanism of the reactions of Au(III) complexes with some biologically relevant molecules. *Dalton Transactions*, 2012, 41, 3633–3641. ISSN: 1477-922. DOI: 10.1039/C2DT11843B
 4. Janković, S. M., **Deković, A.**, Bugarčić, Ž. D., Janković, S. V., Lukić, G., Folić, M., Čanović, D. Effects of aurothiomalate and gold(III) complexes on spontaneous motility of isolated human oviduct. *Biometals*, 2012, 25, 919–925. ISSN: 0966-0844. DOI: 10.1007/s10534-012-9558-2
 5. Arsenijević, M., Milovanović, M., Volarević, V., **Djeković, A.**, Kanjevac, T., Arsenijević, N., Đukić, S., Bugarčić, Ž. D. Cytotoxicity of gold(III) complexes on A549 human lung carcinoma epithelial cell line. *Medicinal Chemistry*, 2012, 8, 2–8. ISSN: 1573-4064. DOI: 10.2174/157340612799278469
 6. Tomović, D. Lj., Bukonjić, A. M., Jevtić, V. V., Ratković, Z. R., Bogojeski, J. V., **Deković, A.**, Radojević, I. D., Čomić, Lj. R., Novaković, S. B., Bogdanović, G. A., Trifunović, S. R., Cupara, S., Radić, G. P. DNA binding, antibacterial and antifungal activities of copper(II) complexes with some S-alkenyl derivatives of thiosalicylic acid. *Transition Metal Chemistry*, 2018, 43, 137–148. ISSN: 0340-4285. DOI: 10.1007/s11243-018-0201-0
 7. Radisavljević, S., **Deković Kesić, A.**, Jovanović, S., Petrović, B. Kinetics and mechanism of interactions of some monofunctional Au(III) complexes with sulphur nucleophiles. *Transition Metal Chemistry*, 2018, 43(4), 133–138. ISSN: 0340-4285. DOI: 10.1007/s11243-018-0221-9
 8. Radisavljević, S., **Deković Kesić, A.**, Čoćić, D., Puchta, R., Senft, L., Milutinović, M., Milivojević, N., Petrović, B. Studies of the stability, nucleophilic substitution reactions, DNA/BSA interactions, cytotoxic activity, DFT and molecular docking of some tetra- and penta-coordinated gold(III) complexes. *New Journal of Chemistry*, 2020, 44, 11172–11187. ISSN: 0022-2860. DOI: 10.1039/D0NJ02037K
 9. Avdović, E., Dimić, D., Fronc, M., Kozisek, J., Klein, E., Milanović, Z., **Kesić, A.**, Marković, Z. Structural and theoretical analysis, molecular docking/dynamics investigation of 3-(1-m-chloridoethylidene)-chromane-2,4-dione: the role of chlorine atom. *Journal of Molecular Structure*, 2021, 1231, 130002. ISSN: 1144-0546. DOI: 10.1016/j.molstruc.2021.12
 10. Milutinović, M., Milivojević, N., Đorđević, N., Nikodijević, D., Radisavljević, S., **Kesić, A.**, Marković, S. Gold(III) complexes with phenanthroline-derivatives ligands induce apoptosis in human colorectal and breast cancer cell lines. *Journal of Pharmaceutical Sciences*, 2022, 111(12), 3215–3223. ISSN: 0022-3549. DOI: 10.1016/j.xphs.2022.09.021
 11. Radisavljević, S., **Kesić, A.**, Čoćić, D., Marković, V., Milovanović, J., Petrović, B., Rilak Simović, A. New gold(III) chlorophenyl terpyridine complex: Biomolecular interactions and anticancer activity against human oral squamous cell carcinoma. *Applied Organometallic Chemistry*, 2023, 37(1). ISSN: 0268-2605. DOI: 10.1002/aoc.6922
 12. **Kesić, A.**, Jeremić, S., Petrović, B. Experimental and theoretical studies of the substitution reactions of some bifunctional Au(III) complexes with biologically relevant thiols and thioethers. *Journal of Coordination Chemistry*, 2023. DOI: 10.1080/00958972.2023.2296382

13. Marković, K., Kesić, A., Novaković, M., Grujović, M., Simijonović, D., Avdović, E., Matic, S., Paunović, M., Milutinović, M., Nikodijević, D., Stefanović, O., Marković, Z. S. Biosynthesis and characterization of silver nanoparticles synthesized using extracts of <i>Agrimonia eupatoria</i> L. and in vitro and in vivo studies of potential medicinal applications. <i>RSC Advances</i>, 2024, 14, 4591–4606. DOI: 10.1039/D3RA07819A 14. Milanović, Ž., Marković, Z., Kesić, A., Jovanović Stević, S., Petrović, B., Avdović, E. Influence of acid–base equilibrium on interactions of some monofunctional coumarin Pd(II) complexes with biologically relevant nucleophiles: Comprehensive kinetic study. <i>Dalton Transactions</i>, 2024, 53, 8275–8288. DOI: 10.1002/aoc.6922 15. Minić Đorđe, Đ., Marković, K., Kesić, A., Grujović, M., Marković, S., Torbica, A., Đukić, N. The effects of silver nanoparticles synthesized with an aqueous extract of <i>Agrimonia eupatoria</i> L. on winter wheat and barley varieties. <i>Journal of the Serbian Chemical Society</i>, 2025, 90(2), 175–186. DOI: 10.2298/JSC241105096M	
Proceedings of international scientific conferences 1. J. Rosić, A. Đeković, B. Petrović, Ž. D. Bugarčić, <i>The interactions between Pt(II) complexes and some sulphur and nitrogen donor biomolecules</i>, 6th Internacional Conference of the Chemical Societies of the South-East European Countries, 2008, Sofia, Bulgaria, September 10-14th, 3-P33. 2. A. Đeković, B. Petrović, Ž. D. Bugarčić, <i>Kinetics and mechanism of the substitution reactions between some Au(III) complexes and biologically relevant ligands</i>, The 5th International Conference on Gold Science, Technology and Its Applications, 2009., Heidelberg, Germany. July 26 – 29th, 2-P349. 3. M. Milovanović, V. Volarević, A. Djeković, B. Petrović, Ž. D. Bugarčić, N. Arsenijević, <i>Effects of Au(III) complexes on human lymphocyte leukemia (HLL) cells</i>, The 5th International Conference on Gold Science, Technology and Its Applications, 2009., Heidelberg, Germany. July 26 – 29th, 2-P357. 4. A. Đeković, B. Petrović, R. van Eldik, Ž. D. Bugarčić, <i>Kinetics and mechanism of the substitution reactions between some bifunctional Au(III) complexes and biologically relevant N-donor ligands</i>, First EuCheMS Inorganic Chemistry Conference, 2011, Manchester, UK, April 11-14th, RM P13. 5. Ana Kesić, Dejan Milenković, Marko Antonijević, Biljana Petrović, Zoran Marković, <i>Molecular docking study on the interaction of Rhodopsin-like receptor with tetra-coordinated gold(III) complex</i>, 1st International Electronic Conference on Biomedicine, (ESB 2021), 1-26 june 2021, MDPI: Basel, Switzerland, doi:10.3390/ECB2021-10264 6. Ana Kesić, Snežana R. Radisavljević, Biljana V. Petrović, <i>Substitution reactions of the monofunctional gold(III) complex and sulphur-donor biologically important ligands</i>, 1st International Conference on Chemo and Bioinformatics, October 26-27, 2021. Kragujevac, Serbia, 391-394, BBMC 1. A. 3, doi: 10.46793/ICCB121.391K	Sum 21

7. **Ana Kesić**, Ivana Raković , Ivana Radojević , Jovana Bogojeski, *Biological studies of organoselenium trans-palladium(II) complexes*, 7th edition of our series of International Electronic Conferences on Medicinal Chemistry ,(ECMC 2021),, November 01-30, **2021**. MDPI: Basel, Switzerland, doi:10.3390/ECMC2021-11448
8. Marko Antonijević, **Ana Kesić**, Dejan Milenković, Jelena Đorović Jovanović, Zoran Marković, *In silico study some tetra- and penta-coordinated gold(III) complexes as potential inhibitors of SARS-CoV-2 main protease*, Belgrade BioInformatics Conference (BELBI **2021**), Virtual Conference, June 21-25, 2021, str. 108.
9. Žiko Milanović, **Ana Kesić**, Dejan Milenković, Edina Avdović, Zoran Marković, *Inhibitor potential of some Au(III) complexes against SARS-CoV-2 Spike Glycoprotein: A Molecular Docking Study*, Belgrade BioInformatics Conference (BELBI **2021**), Virtual Conference, June 21-25, 2021, str. 123
10. **A. Kesić**, S. Jeremić, J. Đorović Jovanović, Z. Marković, *Anthrarrufin as reverse transcriptase (rt)inhibitor and potential inhibitor of hiv replication* , 1th International Conference „Conference on advances in science and technology (COAST 2022), 06-29 May **2022**, Herceg Novi, Montenegro, 399-405. ISBN 978-9940-611-04-0
11. K. G. Marković, M. Ž. Grujović, **A. S Kesić**, Z. S. Markovic, *Green Synthesis of Silver Nanoparticles Using A. eupatoria extract in certain conditions*, 8th edition of our series of International Electronic Conferences on Medicinal Chemistry ,(ECMC 2022)), 01-30 November **2022**, MDPI: Basel, Switzerland,
<https://doi.org/10.3390/ECMC2022-13150> (registering DOI)
12. S. Jeremic, **A. Kesić**, J. Đorović Jovanović, Z. Marković, *Anthrarrufin and its anionic moieties as potential inhibitors of HIV-1 reverse transcriptase (RT)* , 8th edition of our series of International Electronic Conferences on Medicinal Chemistry ,(ECMC 2022)), 01-30 November **2022**, MDPI: Basel, Switzerland,
<https://doi.org/10.3390/ECMC2022-13502> (registering DOI)
13. **Kesić S. Ana**, Marković G. Katarina, Grujović Ž. Mirjana, Markovic S. Zoran. *An investigation of the optimal conditions for the green synthesis of silver nanoparticles using an aqueous extract from the plant Agrimonia eupatoria L.*, The 4th International Online Conference on Nanomaterials, (ICCN 2023), 05-19.May 2023, MDPI *Material Proceeding*. (The 4th International Online Conference on Nanomaterials, (ICCN 2023), 05-19.May) **2023**, Volume 14, Issue doi:10.3390/IOCN2023-14477
<https://doi.org/10.3390/IOCN2023-14477>
14. Jovana V. Bogojeski, Angelina Z. Caković, Biljana Petrović, Snežana Jovanović Stević, **Ana Đeković**, Snežana Radisavljević, Dušan Ćoćić, Snežana Sretenović, Ivana R. Raković,Ivana D. Radojević, Katarina G. Marković, Mirjana Ž. Grujović. *Antimicrobial activity of os(ii) complexes containing n,n,n-inert ligands derivates of pyrazyl-pyridineantimicrobial activity of os(ii) complexes containing n,n,n-inert ligands derivates of pyrazyl-pyridine* 2th International Conference „Conference on advances in science and technology (COAST **2023**), 31 May -03 June **2023**, Herceg Novi, Montenegro, 430-435. ISBN 978-9940-611-06-4
https://confcoast.com/img_publications/52/Zbornik%20radova%202023.pdf

15. Ana S. Kesić, Snežana R. Radisavljević, Jovana V. Bogojeski, Biljana V. Petrović <i>The interaction studies of novel diaminophenazine gold(III) complex and Bovine Serum Albumin (BSA-ibuprofen and BSA-Eozine Y)</i> 2nd International Conference on Chemo and Bioinformatics,(ICCBKG 2023), 28-29 September 2023, Kragujevac, Serbia, 407-410. DOI: 10.46793/ICCBKG23.407K https://www.iccbikg2023.com/_files/ugd/1f3f15_93997e654f464bdf98cc9f70fb57a983.pdf 16. Snežana Jovanović Stević, Snežana R. Radisavljević, Aleksandar Mijatović, Biljana V. Petrović, Ama S. Kesić. <i>The influence of structural modification of Pd(II) pincer-type complexes on the kinetics of substitution reactions)</i> 2nd International Conference on Chemo and Bioinformatics,(ICCBKG 2023), 28-29 September 2023, Kragujevac, Serbia, 411-414. DOI: 10.46793/ICCBKG23.411JShttps://www.iccbikg2023.com/_files/ugd/1f3f15_93997e654f464bdf98cc9f70fb57a983.pdf 17. Svetlana Jeremic, Ana Kesić, Jelena Đorović Jovanović, Biljana Petrović <i>Substituted bifunctional Au(III)-2,2'-bipyridine complexes as potential PARP inhibitors</i> 3th edition of our series of International Electronic Conferences on Medicinal Chemistry ,(ECMC 2023)), 01-30 November 2023, MDPI: Basel, Switzerland https://sciforum.net/paper/view/15778 18. A. Kesić, A. Gigić, M. Grujović, K. Marković, N. Srećković, D. Stevanović, J. Bugarinović, J. Bogojeski.* <i>Synergistic Antibacterial Effect of Copper Complex and Lythrum salicaria Plant Extract</i>. 3rd International Conference on Chemo and Bioinformatics (ICCBKG 2025), 25–26 September 2025, Kragujevac, Serbia, 455–458. DOI: 10.46793/ICCBKG25.453K. 19. D. S. Čočić, B. V. Petrović, A. S. Kesić.* <i>In Silico Investigation of Substitution Mechanism at the Nickel Carbonyl Complex</i>. 3rd International Conference on Chemo and Bioinformatics (ICCBKG 2025), 25–26 September 2025, Kragujevac, Serbia, 662–665. DOI: 10.46793/ICCBKG25.660C. 20. K. G. Marković, M. Ž. Grujović, A. Kesić, M. Paunović, K. Ćirković, I. Radojević, N. H. Djukić.* <i>Evaluation of the Anticancer and Antibiofilm Properties of Agrimonia eupatoria L. Silver Nanoparticles</i>. 3rd International Conference on Chemo and Bioinformatics (ICCBKG 2025), 25–26 September 2025, Kragujevac, Serbia, 277–300. DOI: 10.46793/ICCBKG25.276M. 21. Gigić A.ndrija*, Caković Angelina. , Stevanović Dragana. , Kesić Ana , Bugarinović Jovana , Bogojeski Jovana <i>DNA and HSA Binding Of Copper(II)-Complexes With Imine-Based Ferrocene Derivative</i>, 5thInternationalCongress of Chemists and Chemical Engineers of Bosnia and Herzegovina, 2024, June,27th-June,30th, Sarajevo ISSN: 2232-7266 www.icccebih.dtkts.ba	
Proceedings of national scientific conferences 1. A. Đeković, B. Petrović, Ž. D. Bugarčić, <i>Kinetics and mechanism of the substitution reactions between some Au(III) complexes and biologically relevant ligands</i>, 47th Meeting of the Serbian Chemical Society, 2009, Belgrade, Serbia, March 21st, NH 02.	Sum 13

2. **A. Deković**, B. Petrović, Ž. D. Bugarčić, *Ispitivanje interakcija nekih monofunkcionalnih Au(III) kompleksa sa S-donorskim ligandima*, 49th Meeting of the Serbian Chemical Society, Kragujevac, 13-14 May, **2011**, NH
3. Snežana Radisavljević, **Ana Deković Kesić**, Biljana Petrović, *Novi zlato(III) kompleksi: Sinteza, karakterizacija i ispitivanje interakcija sa 5'-GMP, GSH i L-Met*, 56th Meeting of the Serbian Chemical Society, Niš, 7-8 June, **2019**, NHP7
4. Ž. Milanović, M. Antonijević, **A. Kesić**, D. Dimić, J. Đorović Jovanović, *Antioksidativni kapacitet antrahinona iz biljke Rubia cordifolia linn.* XXVI Savetovanje o biotehnologiji, Čačak **2021**, 12-13. mart, (487-493). DOI: 10.46793/SBT26.487M
5. Ž. Milanović, **A. Kesić**, E. Avdović, J. Đorović Jovanović, D. Milenković, *Uticaj pH vrednosti na antiradikalni kapacitet 4,7-dihidroksikumarina* XXVI Savetovanje o biotehnologiji, Čačak **2021**, 12-13. mart, (481-486)., DOI: 10.46793/SBT26.481M
6. M. Antonijević, J. Đorović Jovanović, **A. Kesić**, D. Milenković, Z. Marković, *Kompleksi zlata kao potencijalni suplementi sa antikancerogenim i antivirusnim delovanjem* XXVI Savetovanje o biotehnologiji, Čačak **2021**, 12-13. mart, (429-434). DOI: 10.46793/SBT26.429A
7. M. Antonijević, D. Simijonović, **A. Kesić**, E. Avdović, Z. Marković, *Antiradikalni kapacitet (E)-N'-1-(2,4-diokso-2H-hromen-3(4H)-ilidene)etil-4-hidroksi-3-metoksiben zohidrazida* XXVI Savetovanje o biotehnologiji, Čačak **2021**, 12-13. mart, (423-428). DOI: 10.46793/SBT26.423A
8. Snežana Radisavljević, **Ana Kesić**, Edina Avdović, Snežana Jovanović-Stević, Biljana Petrović, *Ispitivanje supstitucionih reakcija kompleksa Pd(II) sa biološki značajnim ligandima* 57th Meeting of the Serbian Chemical Society, Kragujevac, 18-19 June, **2021**, NHP1.
9. Žiko B. Milanović, Dušan S. Dimić, **Ana Kesić**, Dejan A. Milenković, *Substituent effect on the binding mode and toxicity of selected 1,4-benzodiazepin-2-one*, 8th International Congress of Serbian Society of Mechanics Kragujevac, Serbia, June 28-30, **2021**.
10. Snežana R. Radisavljevic, Snežana M. Jovanovic, **Ana S. Dekovic-Kesic**, Biljana V. Petrovic, *New dinuclear Au(III) complex: Synthesis, characterization and study of the interections with DNA*, 58th Meeting of the Serbian Chemical Society, **2022**, Belgrade, Serbia, June 9-10, NH 12
11. Andrija D. Gigić, Angelina Z. Caković, Dragana D. Stevanović, Jovana V. Bogojeski, **Ana S. Kesić** *Sinteza i karakterizacija srebra(I) kompleksa sa ligandima na bazi ferocena* 59th Meeting of the Serbian Chemical Society, **2023**, Novi Sad, Serbia, June 1-2, NH 4. https://hdv.org.rs/59shd/download/Book_of_abstracts_2023_SHD59.pdf
12. Andrija D. Gigić, **Ana S. Kesić**, Jovana P. Bugarinović, Nikola Z. Srećković, Vladimir B. Mihailović, Jovana V. Bogojeski *The effect of plant extracts, L. salicaria and S. pratensis on the interaction between copper(II) complexes and biomolecules* 11th Conference of Young Chemists of Serbia 25th October **2025** Kragujevac, Serbia
13. M. Trifunović, S. Miletić, **A. Deković Kesić**, B. Petrović, S. Radisavljević. *Study of the Interactions Between Gold(III) Complex*

Containing 9,10-Diaminophenanthrene and DNA. First Deep Tech Open Science Day Conference 2024, 5 April 2024, Faculty of Engineering Sciences, Kragujevac, Serbia, 38–38. ISBN: 978-86-6335-113-4	
Scientific papers in national journals	Sum
1. Vladislav Volarevic, Marija Milovanovic, Ana <u>Djekovic</u> , Živadin D. Bugarcic, Nebojsa Arsenijevic; Cytotoxic <i>effects of selected gold(III) complexes on the murine BCL-1 B lineage leukaemia cell line</i> ; <i>Serbian Journal of Experimental and Clinical Research</i> ; 2012, 13, 3, 99-102, DOI: 10.5937/SJECR-1721	1

CITATION OF SCIENTIFIC PAPERS

According to the Science Citation Index database, the works of Dr. Ana S. Kesić have been cited 234 times in total (h-index: 8) so far, and 219 times (h-index: 8) in international journals, not counting self-citations (source Scopus).
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BRIEF DESCRIPTION OF RESEARCH IN THE PREVIOUS PERIOD

The research focuses on the synthesis of mononuclear complexes of transition metal ions with potential anticancer activity. The newly synthesized complexes have been thoroughly structurally characterized using advanced analytical techniques. Special attention has been given to studying their interactions with biologically relevant molecules, including amino acids, proteins, and various forms of DNA. In addition, the cytotoxic activity of the complexes has been evaluated on multiple tumor cell lines to assess their potential as novel anticancer agents. As part of the research, green synthesis of silver and zinc oxide nanoparticles has also been carried out using plant extracts as environmentally friendly reducing and stabilizing agents. The resulting nanoparticles were characterized using spectroscopic, diffraction, and microscopic techniques, while their potential biological activity was assessed through evaluations of their antimicrobial, antioxidant, and cytotoxic properties.
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